Case Report

Treatment of Gingival Recession Using OrACELL Decellularized Dermis: Case R.A.

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Gingival recession, a common dental condition seen by dental surgeons, is often treated with a root coverage procedure.[1,2] In the past, subepithelial connective tissue grafts (SCTG) have been used to treat gingival recession; however, these grafts require a secondary surgical site that often leads to increased patient morbidity.[1,2,3] For this reason, alternative grafts that avoid these issues have been developed. For example, acellular dermal matrix allografts have become a popular choice among surgeons to treat gingival recession.[2,4]

One such allograft, OrACELL, is a decellularized human dermis that is typically applied in maxillofacial applications. This matrix of collagen, elastin, and growth factors is designed to be a scaffold for tissue regeneration and proper healing where applied.

The following case presentation involves root coverage procedures for gingival recession using OrACELL®.

PATIENT

- 38 year old Female

DIAGNOSIS

- Gum recession in upper left first bicuspid (#12) and other areas not needing immediate attention (**Fig 1**)

TREATMENT

- Changes to tooth brushing technique to eliminate mechanical trauma
- In preparation for use as a connective tissue graft to #12, OrACELL decellularized dermis pre-rinsed with chlorhexidine
- Local infiltration with Lidocaine and epinephrine
- Root surfaces of #12 and 13 planed aggressively, treated by burnishing with tetracycline onto the root surfaces
- Sulcular incisions made on facial of #12 and 13, extended mesially and distally on the buccal side at the base of the papillae; Partial thickness dissection carried into the vestibule for necessary extension
- OrACELL soaked, trimmed, then sutured over the facial surface of site and the buccal flap was sutured over the graft
- A periodontal dressing was used to protect graft

OUTCOME

- Most of sutures removed at 2 weeks; however some remained functional and were left (**Fig 2**)
- Excellent healing at 4 week follow-up; however, some OrACELL was protruding from free gingival region in area between #12 and #13 (**Figs 3-4**)
- Excellent healing at 2 & 3 months; all remaining sutures removed (**Figs 5-6**)

Figure 1: Pre-operative Root Exposure

Figure 2: 6 Week Post-operative Healing

Figure 3: 2 Month Post-operative Healing

Figure 4: 2 Month Post-operative Healing

Figure 5: 3 Month Post-operative Healing

Figure 6: 5 Month Post-operative Healing

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2. Ayub LG, Ramos UD, Reino DM, et al. A randomized comparative clinical study of two surgical procedures to improve root coverage with the acellular dermal matrix graft. *J Clin Periodontol*. 2012;39:871-878.
3. Wennstrom JL, Zucchelli G. Increased gingival dimensions. A significant factor for successful outcome of root coverage procedure? A 2 year prospective clinical study. *J Clin Periodontol*. 1996;23:770-7.
4. Rahmani ME, Mohammed A, Rigi Lades ME, et al. Comparative clinical evaluation of Acellular Dermal Matrix Allograft and connective tissue graft for the treatment of gingival recession. *J Contemp Dent Prac*. 2006;2:63-70.